

Risk and the Home Equity Conversion Mortgage

Edward J. Szymanoski Jr.

First published: June 1994

<https://doi.org/10.1111/1540-6229.00637>

Abstract

This article analyzes the risks involved with reverse mortgage insurance and explains the pricing model developed for the Home Equity Conversion Mortgage (HECM) demonstration. The paper demonstrates how borrower longevity, interest rates and property value changes all affect pricing, and why the HECM model focuses on property value as the primary source of uncertainty. It goes on to explain why a random walk specification was chosen to forecast property values, and how the principal limit factors, which determine cash payments to borrowers in the HECM program, are calculated.

References

Borch, K.H. 1990. *Economics of Insurance*, North-Holland .

| [Google Scholar](#) |

Case, K.E. and R.J. Shiller. 1989. The Efficiency of the Market for Single-Family Homes. *The American Economic Review* 79: 125-37.

| [Web of Science®](#) | [Google Scholar](#) |

Cunningham, D.F. and P.H. Hendershott. 1984. Pricing FHA Mortgage Default Insurance. *Housing Finance Review* 3: 272-82.

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

[Manage Preferences](#)

[Accept All](#)

[Reject Non-Essential](#)

Gau G.W. 1987. Efficient Real Estate Markets: Paradox or Paradigm? *Journal of the American Real Estate and Urban Economics Association* 15: 1-12.

| [Google Scholar](#) |

Kau, J.B., D.C. Keenan and W.J. Muller, III. 1993. An Option-Based Pricing Model of Private Mortgage Insurance. *The Journal of Risk and Insurance* 60: 288-99.

| [Web of Science®](#) | [Google Scholar](#) |

Malliaris, A.G. and W.A. Brock. 1982. *Stochastic Methods in Economics and Finance*. North-Holland .

| [Google Scholar](#) |

Parzen, E. 1960. *Modern Probability Theory and Its Application*. John Wiley and Sons.

| [Google Scholar](#) |

Ross, S.M. 1983. *Stochastic Processes*. John Wiley and Sons.

| [Google Scholar](#) |

Szumanoski, E.J., Jr. 1990. The FHA Home Equity Conversion Mortgage Insurance Demonstration: A Model to Calculate Borrower Payments and Insurance Risk. U.S. Department of Housing and Urban Development.

| [Google Scholar](#) |

U.S. Department of Housing and Urban Development. 1990. Home Equity Conversion Mortgage Insurance Demonstration: Interim Report to Congress.

| [Google Scholar](#) |

U.S. Department of Housing and Urban Development. 1992. *Preliminary Evaluation of the Home Equity Conversion Mortaaae Insurance Demonstration*.

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#).

[Manage Preferences](#)

[Accept All](#)

[Reject Non-Essential](#)

ABOUT WILEY ONLINE LIBRARY

[Privacy Policy](#)

[Terms of Use](#)

[About Cookies](#)

[Manage Cookies](#)

[Accessibility](#)

[Wiley Research DE&I Statement and Publishing Policies](#)

HELP & SUPPORT

[Contact Us](#)

[Training and Support](#)

[DMCA & Reporting Piracy](#)

[Sitemap](#)

OPPORTUNITIES

[Subscription Agents](#)

[Advertisers & Corporate Partners](#)

CONNECT WITH WILEY

[The Wiley Network](#)

[Wiley Press Room](#)

Copyright © 1999-2026 John Wiley & Sons, Inc or related companies. All rights reserved, including rights for text and data mining and training of artificial intelligence technologies or similar technologies.

WILEY

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

[Manage Preferences](#)

[Accept All](#)

[Reject Non-Essential](#)